

(7) CLAIMS

(1) Vehicle rapid deceleration related injury-counteracting equipment used in reducing vehicular travelling exposure to injury resulting from rapid vehicular deceleration comprising

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path defining means extending suitably and in the direction of travelling along a vehicle, at least once the equipment is operatively fitted if not integrally forming part of a vehicle, along the path of which means defining a traveller holding position is constrained to be displaced even if via a carrier arrangement and at least once the equipment is ready for use, that

10 causes the traveller holding position defining means, once displaceably held if requiring fitting to the path defining means while not necessarily forming part of the equipment, to become re-adjusted into a position of reduced exposure to injury of an occupant of the holding position defining means on moving towards the leading end of the path, and

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a locking facility by means of which the traveller holding position defining means is at least indirectly releasably locked to the path defining means at least once the traveller holding position defining means is operatively fitted to the path defining means if not forming a permanent feature thereof, for permitting its release at the latest in response to a pre-established rate of deceleration established with the traveller holding position defining means under conditions of load, the equipment, once in use, thus causing the traveller holding position defining means to become released at the appropriate rate of vehicular deceleration if not already subject to earlier release, resulting in its forward motion under its inertia along the path up to a position of stoppage, as provided along the path defining means, during which forward motion the traveller holding position defining means becomes

20 re-adjusted into the position of reduced exposure to injury of an occupant.

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(2) Equipment as claimed in claim 1 that makes provision for involving a traveller holding position defining means in the form of a seat re-adjustably held by performing a rearward swivelling action during forward travelling along the path once the equipment is in use, the

30 equipment when so in use thus causing the seat to perform a rearward tilting action on progressing towards the leading end of the path that is of adequate extent to cause an occupant of the seat to become rearwardly tilted during vehicular deceleration to the extent

of at least reducing the whiplash effect owing to such occupant becoming swivelled away from a conventional upright seating position and, in the appropriate case, of reducing the exposure of such occupant to vehicular equipment moving towards the seat under accident occurring conditions.

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(3) Equipment as claimed in claim 2 in which at least the leading end of the path defining means extends along an upwardly extending curve of adequate radius, once the equipment is operatively installed if not integrally forming part of a vehicle, to result in the desired progressive backward tilting of the seat on moving along the curved portion of the path in progressing towards its leading end.

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(4) Equipment as claimed in claim 3 in which at least the largest portion of the path defining means defines a path that extends appropriately arcuately, once the equipment is operatively installed if not integrally forming part of a vehicle, to cause the seat to commence its tilting action, once released, substantially on commencement of travelling from its locked position towards the leading end of the path.

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(5) Equipment as claimed in claim 3 or claim 4 in which the path defining means is in the form of a railage layout making provision for causing the seat to rollably engage against release therewith even if via a carrier arrangement.

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(6) Equipment as claimed in claim 5 in which the railage layout provides two adjacently spaced rails, installed if not integrally forming part of a vehicle, in adequately spaced relationship to result in each rail being located in opposite seat side edge-region co-acting relationship with the seat, as at least indirectly rollably engaging with the rails at least once the equipment is ready for use.

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(7) Equipment as claimed in claim 6 that incorporates a carrier arrangement engaging rollably to the rails while the seat, not necessarily forming part of the equipment, is suitably secured to the carrier arrangement, at least once the equipment is ready for use, to result in the seat co-acting with the railage layout via the carrier arrangement.

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(8) Equipment as claimed in claim 7 in which the carrier arrangement is in the form of a seat-engaging base fitted along opposite sides with rollers engaging with the rails.

(9) Equipment as claimed in claim 8 that comprises the carrier arrangement and the rails as engaged by the seat engaging base, as in the form of an attachment, that is interspaceable between a vehicle seat and its conventional support used for anchoring it to a support base to render such seat rearwardly tiltable once the attachment is operatively anchored and fitted with a seat.

(10) Equipment as claimed in claim 7 in which the carrier arrangement provides runners engaging rollably to the rails with the seat, not necessarily forming part of the equipment thus co-acting with the rails via the runners, at least once the equipment is installed for use if not integrally forming part of a vehicle.

(11) Equipment as claimed in claim 10 in which the locking facility is in the form of shear pins releasably locking the carrier arrangement to the rails towards their trailing ends at least once the equipment is operatively installed if not integrally forming part of a vehicle.

(12) Equipment as claimed in claim 10 or claim 11 in which each runner is in the form of a rail engaging formation defining a railage path along an adequate number of oppositely mounted upper and lower rollers to ensure a firm though smooth rollable engagement with its rail.

(13) Equipment as claimed in claim 12 that comprises the runners as engaging with the rails in the form of an attachment, that is firmly securable to a vehicular seat anchoring location while a seat is secured by its support base to a seat support position to render such seat rearwardly tiltable once the attachment is operatively anchored and fitted with a seat via its support base.

(14) Equipment as claimed in claim 13 that comprises the runners as engaging with the rails, as in the form of an attachment, that is firmly securable to a vehicular seat anchoring location while a conventional seat is securable by its support base to the runners of the

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attachment to render such seat rearwardly tiltable once the attachment is operatively anchored and fitted with such seat.

- 5 (15) Equipment as claimed in any one of claims 10 to 14 in which each rail is fitted with a stopper pin defining the position of stoppage there along.

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